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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

GUHARAY, KARABI

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 07/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/927,361

Examiner

Karabi Guharay

Applicant(s)

LIM, MIN-HO

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on Amendment A, filed on 14 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on 14 April 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

a) ☐ The translation of the foreign language provisional application has been received.

- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of Reference Cited by Examiner.
- 2) ☐ Notice of Drafters' or Patent Drawing Review (PDR).
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Report No. _____.
- 5) ☐ Other _____.

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Amendment A, filed on 14 April 2003, has been fully considered and entered.

Substitute specification has been entered.

Amendments of specification overcome the objection to the disclosure.

Amendments of drawings are acknowledged and overcome the objections to the drawings.

Amendment of claim 4 overcomes the rejection of claim 4.

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: "smooth screen edges are obtained for the effective surface of the shadow mask at every length of the first slots between and inclusive of 70%-110% of a vertical length of a fourth slot" as recited in amended claim 1 is not supported by specification.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-4 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In this case, independent claim 1 recites "smooth

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screen edges are obtained *at every length* of the first slots between and inclusive of 70%-110% of a vertical length of the fourth slot". Original specification discloses that length of the first slot is within the range 70%- 110% and inclusive. But does not disclose that each slot length can have every possible values between and inclusive of claimed range. Thus considered as new matter.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In this case, amended claim 1 recites "smooth screen edges" The term "smooth" is a relative term, which renders the claim indefinite. The term "smooth" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Further applicant recites "length" of the first slot, it is not clear which length applicant is referring to, since slots have dimensions in two directions.

Furthermore, the phrase "every length of the first slots between and inclusive of 70%-110% of a vertical length of a fourth slot" renders claim indefinite. There are infinite

How a single shadow mask can have slots having every possible slot length, which are infinite number of different lengths. Thus scope of the claim cannot be determined.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Robbins (US 4631440).

Regarding claim 1, Robbins discloses a color CRT (Fig 1) comprising a panel (18) having a luminous screen (phosphor pattern 19, 20, 21) on an inner surface thereof, a funnel portion connected to the panel, an electron gun (12, 13, 14) mounted on a neck portion of the funnel, electron gun emitting electron beams (15, 16, 17) towards the luminous screen, a shadow mask (22) disposed in a fixed interval to the luminous screen, a frame for supporting mask (see Fig 1), shadow mask includes an effective surface having plurality of the slots and a non-effective surface surrounding the effective surface (lines 46-62 of column 2), wherein slots includes first slots (33a, 34a, 33b, 34b, of Fig 3) comprising each outermost slot of adjacent vertical columns of slots in a vertical axis direction of the effective surface of the shadow mask, (along top edge 120, Fig 2), a horizontal row of second slots being adjacent to first slots in the vertical axis direction (Y-axis) and third slots being adjacent to second slots in the vertical axis direction (see Fig 3) wherein smooth screen edge (top line 120) are obtained for the effective surface of the shadow mask at a length of the vertical axis direction of the

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first slots (33a, 34a, 33b, 34b) is between and inclusive of 70% ~110% of the vertical length of the fourth slots (here fourth slots are all full length slot 33, where as some of the length of the first slots (33a) are equal to full length of the slot 33, which is 100%, and slots 34a and 34b are with in 50-80% of full length).

Regarding claim 2, Robbins discloses that the length of the vertical axis direction of the second slots (second slots are all full length slots 33) is in the range of 70% ~ 110% of a length of the fourth slots (in this case 100%).

Regarding claim 3, Robbins discloses that the length of the vertical axis direction of the third slots (third slots are all full length slots 33) is in the range of 70% ~ 110% of a length of the fourth slots (in this case 100%).

Regarding claim 4, Robbins discloses that a minimum length of the vertical axis direction of the first slot (partial slot 34) is more than 63% of the maximum length of the vertical axis direction of the first slot (full length slot 33). See claim 3 of column 4.

Regarding claim 5, Robbins discloses a color CRT (Fig 1) comprising a panel (18) having a luminous screen (phosphor pattern 19, 20, 21) on an inner surface thereof, a funnel portion connected to the panel, an electron gun (12, 13, 14) mounted on a neck portion of the funnel, electron gun emitting electron beams (15, 16, 17) towards the luminous screen, a shadow mask (22) disposed in a fixed interval to the luminous screen, a frame for supporting mask (see Fig 1), shadow mask includes an effective surface (lines 46-62 of column 2), slots include first slots comprising each outer most slot of adjacent vertical columns of slots (33a, 34a, 33b, 34b, of Fig 3, along top

edge 120, Fig 2) and a minimum length of the vertical axis direction of the first slot (partial slot 34) is greater than 63% of the maximum length of the vertical axis direction of the first slot (full length slot 33). See claim 3 of column 4.

Response to Arguments

Applicant's arguments filed on 14 April 2003 have been fully considered but they are not persuasive. Applicant argued that smooth screen edges are obtained at all points in ranges between 70% and 110% of a full length slot, inclusive of the 70% and 110%.

However, It is not supported by original specification that smooth screen edges are obtained for the effective surface of the shadow mask at *all points or at every length* between and inclusive of 70% and 110%.

Moreover prior art first slot lengths fall within the range of originally claimed range.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karabi Guharay whose telephone number is (703) 305-1971. The examiner can normally be reached on Monday-Friday 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (703) 305-4794. The fax phone number for the organization is (703) 308-7382.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

K.G.
Karabi Guharay
Patent Examiner
Art Unit 2879



Handwritten signature of Karabi Guharay, Patent Examiner, Art Unit 2879.